The specification is amended to correct a mathematical symbol that printed incorrectly due to a computer/printer error.

Attached hereto is a marked up version of the change made to the specification by this preliminary amendment. The attached page is captioned "**Version with markings to show changes made**".

CONCLUSION

Applicant submits Claims 1-29 are in condition for examination, early notification of which is earnestly solicited. Should the Examiner be of the view that an interview would expedite consideration of this Amendment or of the application at large, request is made that the Examiner telephone the Applicant's attorney at (908) 518-7700 in order that any outstanding issues be resolved.

FEES

If there are any fees due and owing in respect to this amendment, the Examiner is authorized to charge such fees to deposit account number 50-1047.

Respectfully submitted,

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I hereby certify that this document and any document referenced herein has been transmitted via facsimile to the US Patent and Trademark Office at (703) 872-9318 on 3/18/03.

Marjorie Scariati
Printed Name of Person Mailing Correspondence

Marjorie Scariati
(Signature)

Version with markings to show changes made

In the specification:

[0028] Returning to FIG. 4, waveguiding segments 3301 … 330n have progressively smaller widths as they approach output waveguides 316. For instance, in the embodiment of the invention shown in FIG. 4, waveguiding segment 3301 may have a width of about 18 microns whereas waveguiding segment 330n may have a width of about 2 microns. Moreover, the width of cladding regions 3401 … 340n between adjacent waveguiding segments become progressively larger as they approach waveguides 316. For instance, if the width of the first cladding region 3401 is about 2 microns the width of cladding region 340n may be about 18 microns. In this illustrative embodiment, the combined width 350 of each waveguiding segment 330n and its adjacent cladding region 340n is a constant that can be mathematically expressed as follows:

$$W(330_n)+W(340_n)=[\blacklozenge]\ \underline{\Delta}$$

[0029] In the aforementioned embodiment of the invention, the period ([♦]$\underline{\Delta}$) = 20 microns. It should be noted that FIG. 4 is not a dimensionally exact view of the star coupler; rather, the relative sizes of the waveguiding segments 3301 … 330n, the cladding regions 3401 … 340n and the waveguide slab 310 have been drawn to illustrate that the widths of the waveguiding segments decrease as they become progressively closer to output waveguides 316; and that the waveguiding segments, the waveguides, and the slab are coplanar and comprise the same material. In FIG. 4 the widths of waveguiding segments 3301 … 330n are shown decreasing linearly. However, a number of variations are possible that improve insertion loss over the prior art. For example, [♦]$\underline{\Delta}$ does not need to be a constant and the width of the waveguiding segments do not need to decrease linearly. If, for example, it has been decided that [♦]$\underline{\Delta}$ is to be constant, then the ratio of the width $W(330_n)$ to the period [♦]$\underline{\Delta}$ can be viewed as a "duty cycle." Moreover, the duty cycle $W(330_n)/[\blacklozenge]\ \underline{\Delta}$ can be related to the distance from the output waveguides 316 by a number of functional relationships including, but not limited to, raised cosine, linear, and parabolic. These functional relationships are graphically illustrated in FIG. 7.

However, the important requirement to be followed in achieving the benefits of the present invention is that W(330_n) decreases as the waveguiding segments 3301 … 330_n become progressively closer to output waveguides 316.